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A NEW PLETHODONT SALAMANDER FROM NEW MEXICO.

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A single specimen of a plethodontid salamander was caught at an elevation of about 9000 ft., in the Sacramento Mountains, at Cloudcroft, New Mexico, by Mr. D. E. Hardy, of the Department of Entomology of the University of Kansas, while collecting insects in that region. It was found under the bark of a rotten pine log, in heavy pine forest.

Two plethodontids have been reported from this general region: *Bolitoglossa bellii* in Arizona; *Eurycea multiplicata* in New Mexico. Since both of these records are far out of the normal range of the respective species it seems wiser to disregard them. The records are old and are very probably due to error in locality data.

The Eastern Rocky Mountains, so far as known endemic species of amphibians are concerned, is, relatively speaking, a faunal desert. The finding of this form suggests the possibility that the mountains have been inadequately explored and that other species and, not impossibly, genera, await discovery.

Plethodon hardii, sp. nov.

Type.—EHT–HMS No. 23656, adult male. Collected in Sacramento Mountains (9,000 ft.) at Cloudcroft, New Mexico, June 29, 1940, by D. E. Hardy.

Diagnosis.—Fourteen costal grooves, the adpressed limbs separated by about 3½ costal folds; a well-defined median sulcus from between eyes to neck. Reduced number of mandibular, maxillary and premaxillary teeth, not exceeding 15 in either side of lower or upper jaw. Vomerine teeth, 5–6, the series separated from each other by a distance nearly as great as half the length of a single series, separated from parasphenoid teeth by a distance nearly equal to length of one series.

Description of type.—A rather small species of the genus, the snout to

vent measurement, 29 mm.; nostrils small; length of eye about 1/5 to 1/6 longer than snout; distance between nostrils about 1/5 greater than distance from eye to nostril; two rather prominent ridges rise in interorbital region and extend to neck where they join; these are separated by a well-defined sulcus; snout truncate, smooth, unpitted; no swelling below nostril; nasolabial groove distinct; no canthus rostralis; narrowest interorbital width 1/3 greater than the width of an eyelid; orbits prominent, seen in profile; line of mouth slightly sinuous; a slight fold across throat between angles of the jaws; a groove from this fold across jaw angle passes up and joins a sinuous groove which extends back from the eye to the nuchal groove (fold); latter very distinct; a continuation of the nuchal groove curves up on side of neck to the dorsal surface but fails to connect with its fellow from the opposite side.

Tongue apparently somewhat boletoid but attached in front (the tongue has been fully extruded and is attached by a narrow bit of tissue with evidence that some tearing of the tissues has taken place so that the normal condition can not be ascertained).

Maxillary-premaxillary teeth 12–12 which vary in size; vomerine teeth 6–7, in very slightly curved, diagonally placed series; outer tooth of each series behind the outer edge of the choanae, the series separated medially by a space equal to half the length of one series; parasphenoid teeth in two elongate series so closely approximated as to appear as a single group, somewhat pointed anteriorly, widened posteriorly and somewhat notched behind; separated from the vomerine teeth by a distance very slightly less than the length of a vomerine series; mandibular teeth 13–14 confined to anterior part of jaw; choanae small, subcircular, the diameter equal to about half the distance between vomerine series; a small circular pit in middle of palate slightly in advance of the choanae; apparently 14 costal grooves continuing almost to the median dorsal line, and ventrally some can be traced across abdomen; no linear middorsal groove.

Limbs well developed, the ascending order of size of fingers, 1, 4, 2, 3, the first very short and save for tip is included in membrane; no webbing between digits beyond ends of the metacarpals; digits not tapering; no metacarpal tubercles; ascending order of size in toes, 1, 5, 2, 3 = 4; first toe wholly included in membrane; a slight web between bases of three outer toes beyond ends of the metatarsals; toes not tapering or only slightly so; no metatarsal tubercles; subterminal pads on all digits only very moderately developed; adpressed limbs separated by about three and one half costal folds.

Due to preservation in strong alcohol the normal character of the skin is somewhat in doubt; some pitting is evident and in places the skin shows some minute corrugation; the costal folds are slightly wrinkled; cloaca papillate.

Measurements in mm.—Snout to anterior part of vent, 39; anterior part of vent to tip of tail, 42; tip of snout to nuchal fold, 9.8; width of head, 6; arm, 8.2; hind leg, 9.2; axilla to groin, 24.2.

Color.—Back brownish, the sides, gray; edge of upper lip and ventral surface of body somewhat dirty yellowish-white. There are certain dark

spots on abdomen but these may be due to discoloration; ventral part of tail lighter than upper part, the extreme tip whitish.

Remarks.—The type locality of this species is in a region, for the most part, too arid to support plethodont salamanders. However, the higher mountain tops have clouds and fog, as well as more rainfall, and in such a habitat the present species was discovered. The present distribution of the genus shows a number of apparent discontinuities, the greatest gap being between New Mexico and the States of Washington and Oregon. Whether the discontinuity is real or only apparent can be known when careful exploration has been made in the intervening regions.

When further specimens are available a description of skeletal characters, as well as more correct descriptions of the tongue and skin characters, can be given. I suspect that females will show a larger series of mandibular, and maxillary-premaxillary teeth than the male type.

When the above characters are certainly known it will be possible to discern the relationships with other species of the genus.

The species is named for its discoverer. (Since the above was written, *Plethodon idahoensis*, Slater and Slipp, has been described from northern Idaho.)